



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,470	10/22/2003	Don Kennard	NOBELB.063DV1	5956
20995 7590 05/04/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER BUMGARNER, MELBA N	
			ART UNIT 3732	PAPER NUMBER
			NOTIFICATION DATE 05/04/2007	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
eOAPilot@kmob.com

Office Action Summary

Application No.

10/691,470

Applicant(s)

KENNARD, DON

Examiner

Melba Bumgarner

Art Unit

3732

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 39-57, 62 and 63 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 39-57, 62 and 63 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 39, 45-57, 62, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. (5,074,790) in view of Christensen (3,466,748). Bauer et al. et al. disclose a dental implant elongated along an implant axis comprising an abutment 7 adapted to bond with a dental prosthesis, a flexible neck segment 5 connected to the abutment, a body segment 1 connected to the neck segment, having threads extending helically about the implant axis and tapering from a maximum adjacent the neck segment to a minimum at a distal end, and a torque engagement segment above the body segment; however, Bauer et al. does not show the thread diameter tapering non-linearly. Christensen teaches a dental implant comprising a body segment having threads extending helically about the implant axis and tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implant of Bauer et al. have the thread tapering of Christensen in order to secure the implant in to the socket and the jawbone in view of Christensen. It would have been obvious to one of ordinary skill in the art as to the specific location of the torque engagement segment above the body segment, since rearranging parts of an invention involves only routine skill in the art. Christensen shows the body segment is at least about 12 mm in length. It would have an obvious matter of choice to one

Art Unit: 3732

of ordinary skill in the art to have a diameter of about 3.0 mm instead of 3.175 mm as in Christensen. The body segment is approximately equal to the thickness of the cortical layer. The neck segment and abutment has a length of greater than about 5 mm. The total length along the implant axis is 20 mm. A thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end. It would have been an obvious matter of choice to one of ordinary skill in the art as to the specific depth and pitch of the body segment. Bauer et al. show the torque engagement segment comprising a plurality of flat facets 8 configured to engage a wrench. Material of the implant is titanium alloy.

3. Claims 39, 40-44, 47-52, 57, 62, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer et al. in view of Hahn et al. (5,795,160). Bauer et al. disclose a dental implant elongated along an implant axis comprising an abutment 7 adapted to bond with a dental prosthesis, a flexible neck segment 5 connected to the abutment, a body segment 1 connected to the neck segment, having threads extending helically about the implant axis and tapering from a maximum adjacent the neck segment to a minimum at a distal end, and a torque engagement segment above the body segment; however, Bauer et al. does not show the thread diameter tapering non-linearly. Hahn et al. teach a dental implant comprising the body segment having threads extending helically about the implant axis and tapering non-linearly from a maximum adjacent the neck segment to a minimum at a distal end. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have implant of Bauer et al. have the thread tapering of Hahn et al. in order to install the implant with lateral compression of cancellous tissue and without exerting undue lateral force on the bone in view of Hahn et al. It would have been obvious to one of ordinary skill in the art as to the specific location of the

Art Unit: 3732

torque engagement segment above the body segment, since rearranging parts of an invention involves only routine skill in the art. Hahn et al. show the threaded body segment comprises an upper flared section proximal to the neck portion, an intermediate section and a tapered lower section, the lower section having a smaller angle of taper as compared to the upper section. It would have an obvious matter of choice to one of ordinary skill in the art at the time the invention was made as to the range of taper angle of the threads and the neck segment narrower than the abutment. The body segment is approximately equal to the thickness of the cortical layer. The body segment is at least about 12 mm in length. The neck segment and abutment has a length of greater than about 5 mm. The total length along the implant axis is 20 mm. A thread depth tapering from a maximum thread depth adjacent the neck segment to a minimum thread depth adjacent the distal end. Material of the implant is titanium.

Response to Arguments

4. Applicant's arguments with respect to the rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melba Bumgarner whose telephone number is 571-272-4709. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cris Rodriquez can be reached at 571-272-4964. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3732

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Melba Bumgarner
Primary Examiner